

### ABSTRACT

A hydrogen storage tank has an outer cylinder and a cylindrical hydrogen storage module within the outer cylinder spaced apart from an inner peripheral surface of the outer cylinder to provide a hydrogen passage therebetween. The cylindrical hydrogen storage module includes a lamination having a plurality of hydrogen storage units filled with powdery hydrogen absorption material and a hydrogen absorption and desorption surface on an entire outer peripheral surface, while interposing a heating/cooling element between ones of adjacent units. First and second main passages penetrate the lamination in a lamination direction of the units, and permit heating fluid and cooling fluid to flow therethrough. Sub passages branch from the main passages and extend over within each of the heating/cooling elements.